

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/715,810A  
Source: 1Fw/6  
Date Processed by STIC: 7/18/06

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 07/18/2006

PATENT APPLICATION: US/10/715,810A

TIME: 13:30:39

Input Set : A:\ALLE0004-100sequencelisting.txt

Output Set: N:\CRF4\07182006\J715810A.raw

```

3 <110> APPLICANT: Li, Shengwen
4      Kei, Aoki R.
5      Steward, Lance E.
6      France, Joe
8 <120> TITLE OF INVENTION: Rescue Agents for Treating a Botulinum Toxin Intoxication
10 <130> FILE REFERENCE: ALLE0004-100
12 <140> CURRENT APPLICATION NUMBER: 10/715,810A
13 <141> CURRENT FILING DATE: 2003-11-17
15 <160> NUMBER OF SEQ ID NOS: 121
17 <170> SOFTWARE: PatentTo version 3.2
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 4
21 <212> TYPE: PRT
22 <213> ORGANISM: Artificial Sequence
24 <220> FEATURE:
25 <223> OTHER INFORMATION: chemically synthesized peptide
28 <220> FEATURE:
29 <221> NAME/KEY: MISC_FEATURE
30 <222> LOCATION: (2)..(3)
31 <223> OTHER INFORMATION: Xaa is any amino acid.
33 <400> SEQUENCE: 1
W--> 35 Glu Xaa Xaa His
36 1
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 5
41 <212> TYPE: PRT
42 <213> ORGANISM: Artificial sequence
44 <220> FEATURE:
45 <223> OTHER INFORMATION: chemically syntesized peptide
48 <220> FEATURE:
49 <221> NAME/KEY: MISC_FEATURE
50 <222> LOCATION: (3)..(4)
51 <223> OTHER INFORMATION: Xaa is any amino acid.
53 <400> SEQUENCE: 2
W--> 55 Gly Thr Xaa Xaa Asn
56 1      5
59 <210> SEQ ID NO: 3
60 <211> LENGTH: 13
61 <212> TYPE: PRT
62 <213> ORGANISM: Artificial Sequence
64 <220> FEATURE:
65 <223> OTHER INFORMATION: chemically synthesized peptide
67 <400> SEQUENCE: 3

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69 Arg Gly Ser His His His His His Gly Ser Gly Thr
70 1 5 10
73 <210> SEQ ID NO: 4
74 <211> LENGTH: 1302
75 <212> TYPE: PRT
76 <213> ORGANISM: Clostridium botulinum
78 <400> SEQUENCE: 4
80 Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly
81 1 5 10 15
84 Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met Gln Pro
85 20 25 30
88 Val Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg
89 35 40 45
92 Asp Thr Phe Thr Asn Pro Glu Gly Asp Leu Asn Pro Pro Pro Glu
93 50 55 60
96 Ala Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr
97 65 70 75 80
100 Asp Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu
101 85 90 95
104 Arg Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val
105 100 105 110
108 Arg Gly Ile Pro Phe Trp Gly Gly Ser Thr Ile Asp Thr Glu Leu Lys
109 115 120 125
112 Val Ile Asp Thr Asn Cys Ile Asn Val Ile Gln Pro Asp Gly Ser Tyr
113 130 135 140
116 Arg Ser Glu Glu Leu Asn Leu Val Ile Ile Gly Pro Ser Ala Asp Ile
117 145 150 155 160
120 Ile Gln Phe Glu Cys Lys Ser Phe Gly His Glu Val Leu Asn Leu Thr
121 165 170 175
124 Arg Asn Gly Tyr Gly Ser Thr Gln Tyr Ile Arg Phe Ser Pro Asp Phe
125 180 185 190
128 Thr Phe Gly Phe Glu Glu Ser Leu Glu Val Asp Thr Asn Pro Leu Leu
129 195 200 205
132 Gly Ala Gly Lys Phe Ala Thr Asp Pro Ala Val Thr Leu Ala His Glu
133 210 215 220
136 Leu Ile Tyr Ala Gly His Arg Leu Tyr Gly Ile Ala Ile Asn Pro Asn
137 225 230 235 240
140 Arg Val Phe Lys Val Asn Thr Asn Ala Tyr Tyr Glu Met Ser Gly Leu
141 245 250 255
144 Glu Val Ser Phe Glu Glu Leu Arg Thr Phe Gly Gly His Asp Ala Lys
145 260 265 270
148 Phe Ile Asp Ser Leu Gln Glu Asn Glu Phe Arg Leu Tyr Tyr Tyr Asn
149 275 280 285
152 Lys Phe Lys Asp Ile Ala Ser Thr Leu Asn Lys Ala Lys Ser Ile Val
153 290 295 300
156 Gly Thr Thr Ala Ser Leu Gln Tyr Met Lys Asn Val Phe Lys Glu Lys
157 305 310 315 320
160 Tyr Leu Leu Ser Glu Asp Thr Ser Gly Lys Phe Ser Val Asp Lys Leu
161 325 330 335

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164 Lys Phe Asp Lys Leu Tyr Lys Met Leu Thr Glu Ile Tyr Thr Glu Asp
165           340           345           350
168 Asn Phe Val Lys Phe Phe Lys Val Leu Asn Arg Lys Thr Tyr Leu Asn
169           355           360           365
172 Phe Asp Lys Ala Val Phe Lys Ile Asn Ile Val Pro Lys Val Asn Tyr
173           370           375           380
176 Thr Ile Tyr Asp Gly Phe Asn Leu Arg Asn Thr Asn Leu Ala Ala Asn
177 385           390           395           400
180 Phe Asn Gly Gln Asn Thr Glu Ile Asn Asn Met Asn Phe Thr Lys Leu
181           405           410           415
184 Lys Asn Phe Thr Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg
185           420           425           430
188 Gly Ile Ile Thr Ser Lys Thr Lys Ser Leu Asp Lys Gly Tyr Asn Lys
189           435           440           445
192 Ala Leu Asn Asp Leu Cys Ile Lys Val Asn Asn Trp Asp Leu Phe Phe
193           450           455           460
196 Ser Pro Ser Glu Asp Asn Phe Thr Asn Asp Leu Asn Lys Gly Glu Glu
197 465           470           475           480
200 Ile Thr Ser Asp Thr Asn Ile Glu Ala Ala Glu Glu Asn Ile Ser Leu
201           485           490           495
204 Asp Leu Ile Gln Gln Tyr Tyr Leu Thr Phe Asn Phe Asp Asn Glu Pro
205           500           505           510
208 Glu Asn Ile Ser Ile Glu Asn Leu Ser Ser Asp Ile Ile Gly Gln Leu
209           515           520           525
212 Glu Leu Met Pro Asn Ile Glu Arg Phe Pro Asn Gly Lys Lys Tyr Glu
213           530           535           540
216 Leu Asp Lys Tyr Thr Met Phe His Tyr Leu Arg Ala Gln Glu Phe Glu
217 545           550           555           560
220 His Gly Lys Ser Arg Ile Ala Leu Thr Asn Ser Val Asn Glu Ala Leu
221           565           570           575
224 Leu Asn Pro Ser Arg Val Tyr Thr Phe Phe Ser Ser Asp Tyr Val Lys
225           580           585           590
228 Lys Val Asn Lys Ala Thr Glu Ala Ala Met Phe Leu Gly Trp Val Glu
229           595           600           605
232 Gln Leu Val Tyr Asp Phe Thr Asp Glu Thr Ser Glu Val Ser Thr Thr
233           610           615           620
236 Asp Lys Ile Ala Asp Ile Thr Ile Ile Ile Pro Tyr Ile Gly Pro Ala
237 625           630           635           640
240 Leu Asn Ile Gly Asn Met Leu Tyr Lys Asp Asp Phe Val Gly Ala Leu
241           645           650           655
244 Ile Phe Ser Gly Ala Val Ile Leu Leu Glu Phe Ile Pro Glu Ile Ala
245           660           665           670
248 Ile Pro Val Leu Gly Thr Phe Ala Leu Val Ser Tyr Ile Ala Asn Lys
249           675           680           685
252 Val Leu Thr Val Gln Thr Ile Asp Asn Ala Leu Ser Lys Arg Asn Glu
253           690           695           700
256 Lys Trp Asp Glu Val Tyr Lys Tyr Ile Val Thr Asn Trp Leu Ala Lys
257 705           710           715           720
260 Val Asn Thr Gln Ile Asp Leu Ile Arg Lys Lys Met Lys Glu Ala Leu

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Input Set : A:\ALLE0004-100sequencelisting.txt

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261          725          730          735
264 Glu Asn Gln Ala Glu Ala Thr Lys Ala Ile Ile Asn Tyr Gln Tyr Asn
265          740          745          750
268 Gln Tyr Thr Glu Glu Glu Lys Asn Asn Ile Asn Phe Asn Ile Asp Asp
269          755          760          765
272 Leu Ser Ser Lys Leu Asn Glu Ser Ile Asn Lys Ala Met Ile Asn Ile
273          770          775          780
276 Asn Lys Phe Leu Asn Gln Cys Ser Val Ser Tyr Leu Met Asn Ser Met
277 785          790          795          800
280 Ile Pro Tyr Gly Val Lys Arg Leu Glu Asp Phe Asp Ala Ser Leu Lys
281          805          810          815
284 Asp Ala Leu Leu Lys Tyr Ile Tyr Asp Asn Arg Gly Thr Leu Ile Gly
285          820          825          830
288 Gln Val Asp Arg Leu Lys Asp Lys Val Asn Asn Thr Leu Ser Thr Asp
289          835          840          845
292 Ile Pro Phe Gln Leu Ser Lys Tyr Val Asp Asn Gln Arg Leu Leu Ser
293          850          855          860
296 Thr Phe Thr Glu Tyr Ile Lys Asn Ile Ile Asn Thr Ser Ile Leu Asn
297 865          870          875          880
300 Leu Arg Tyr Glu Ser Asn His Leu Ile Asp Leu Ser Arg Tyr Ala Ser
301          885          890          895
304 Lys Ile Asn Ile Gly Ser Lys Val Asn Phe Asp Pro Ile Asp Lys Asn
305          900          905          910
308 Gln Ile Gln Leu Phe Asn Leu Glu Ser Ser Lys Ile Glu Val Ile Leu
309          915          920          925
312 Lys Asn Ala Ile Val Tyr Asn Ser Met Tyr Glu Asn Phe Ser Thr Ser
313          930          935          940
316 Phe Trp Ile Arg Ile Pro Lys Tyr Phe Asn Ser Ile Ser Leu Asn Asn
317 945          950          955          960
320 Glu Tyr Thr Ile Ile Asn Cys Met Glu Asn Asn Ser Gly Trp Lys Val
321          965          970          975
324 Ser Leu Asn Tyr Gly Glu Ile Ile Trp Thr Leu Gln Asp Thr Gln Glu
325          980          985          990
328 Ile Lys Gln Arg Val Val Phe Lys Tyr Ser Gln Met Ile Asn Ile Ser
329          995          1000          1005
332 Asp Tyr Ile Asn Arg Trp Ile Phe Val Thr Ile Thr Asn Asn Arg
333          1010          1015          1020
336 Leu Asn Asn Ser Lys Ile Tyr Ile Asn Gly Arg Leu Ile Asp Gln
337          1025          1030          1035
340 Lys Pro Ile Ser Asn Leu Gly Asn Ile His Ala Ser Asn Asn Ile
341          1040          1045          1050
344 Met Phe Lys Leu Asp Gly Cys Arg Asp Thr His Arg Tyr Ile Trp
345          1055          1060          1065
348 Ile Lys Tyr Phe Asn Leu Phe Asp Lys Glu Leu Asn Glu Lys Glu
349          1070          1075          1080
352 Ile Lys Asp Leu Tyr Asp Asn Gln Ser Asn Ser Gly Ile Leu Lys
353          1085          1090          1095
356 Asp Phe Trp Gly Asp Tyr Leu Gln Tyr Asp Lys Pro Tyr Tyr Met
357          1100          1105          1110

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360 Leu Asn Leu Tyr Asp Pro Asn Lys Tyr Val Asp Val Asn Asn Val
361      1115                      1120                      1125
364 Gly Ile Arg Gly Tyr Met Tyr Leu Lys Gly Pro Arg Gly Ser Val
365      1130                      1135                      1140
368 Met Thr Thr Asn Ile Tyr Leu Asn Ser Ser Leu Tyr Arg Gly Thr
369      1145                      1150                      1155
372 Lys Phe Ile Ile Lys Lys Tyr Ala Ser Gly Asn Lys Asp Asn Ile
373      1160                      1165                      1170
376 Val Arg Asn Asn Asp Arg Val Tyr Ile Asn Val Val Val Lys Asn
377      1175                      1180                      1185
380 Lys Glu Tyr Arg Leu Ala Thr Asn Ala Ser Gln Ala Gly Val Glu
381      1190                      1195                      1200
384 Lys Ile Leu Ser Ala Leu Glu Ile Pro Asp Val Gly Asn Leu Ser
385      1205                      1210                      1215
388 Gln Val Val Val Met Lys Ser Lys Asn Asp Gln Gly Ile Thr Asn
389      1220                      1225                      1230
392 Lys Cys Lys Met Asn Leu Gln Asp Asn Asn Gly Asn Asp Ile Gly
393      1235                      1240                      1245
396 Phe Ile Gly Phe His Gln Phe Asn Asn Ile Ala Lys Leu Val Ala
397      1250                      1255                      1260
400 Ser Asn Trp Tyr Asn Arg Gln Ile Glu Arg Ser Ser Arg Thr Leu
401      1265                      1270                      1275
404 Gly Cys Ser Trp Glu Phe Ile Pro Val Asp Asp Gly Trp Gly Glu
405      1280                      1285                      1290
408 Arg Pro Leu His His His His His His
409      1295                      1300
412 <210> SEQ ID NO: 5
413 <211> LENGTH: 1296
414 <212> TYPE: PRT
415 <213> ORGANISM: Clostridium botulinum
417 <400> SEQUENCE: 5
419 Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly
420 1      5      10      15
423 Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met Gln Pro
424      20      25      30
427 Val Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg
428      35      40      45
431 Asp Thr Phe Thr Asn Pro Glu Glu Gly Asp Leu Asn Pro Pro Pro Glu
432      50      55      60
435 Ala Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr
436 65      70      75      80
439 Asp Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu
440      85      90      95
443 Arg Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val
444      100     105     110
447 Arg Gly Ile Pro Phe Trp Gly Gly Ser Thr Ile Asp Thr Glu Leu Lys
448      115     120     125
451 Val Ile Asp Thr Asn Cys Ile Asn Val Ile Gln Pro Asp Gly Ser Tyr
452      130     135     140

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 07/18/2006  
PATENT APPLICATION: US/10/715,810A      TIME: 13:30:40

Input Set : A:\ALLE0004-100sequencelisting.txt  
Output Set: N:\CRF4\07182006\J715810A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 2,3  
Seq#:2; Xaa Pos. 3,4

VERIFICATION SUMMARY

DATE: 07/18/2006

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TIME: 13:30:40

Input Set : A:\ALLE0004-100sequencelisting.txt

Output Set: N:\CRF4\07182006\J715810A.raw

L:35 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0

L:55 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0